

536464

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number  
**WO 2004/093707 A2**

(51) International Patent Classification<sup>7</sup>:

**A61C**

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/US2004/010567

(22) International Filing Date: 5 April 2004 (05.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/464,958 23 April 2003 (23.04.2003) US  
60/532,385 26 December 2003 (26.12.2003) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants and

(72) Inventors: **BULARD, Ronald, A.** [US/US]; 2405 Oak Hollow W.W., Ardmore, OK 73401 (US). **HADWIN, Stephen, J.** [US/US]; 1606 Rosedale Street, Ardmore, OK 73401 (US).

(74) Agent: **BRISCOE, Kurt, G.**; Norris McLaughlin & Marcus, P.A., 30th Floor, 220 East 42nd Street, New York, NY 10017 (US).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/093707 A2

(54) Title: ONE PIECE DENTAL IMPLANT AND USE THEREOF IN PROSTODONTIC AND ORTHODONTIC APPLICATIONS

(57) Abstract: The specification describes one-piece dental implants comprising a threaded shaft, optionally a non-circular abutment and a head having a shape which is capable of accepting a keeper cap or an O-ring, or which is capable of accepting and retaining a dental wire. The implants have dimensions that permit their use in a non-surgical method of insertion into bone, and are useful in both prosthodontic and orthodontic applications. It is emphasized that this abstract is provided to comply with the rules requiring an abstract which will allow a searcher or other reader to quickly ascertain the subject matter of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims.